

IN THE CLAIMS

1. (currently amended) In a method for adjusting resistance force of a liquid damper having a cavity divided into at least two chambers by a piston for the volume of one of the ~~chamber chambers~~ to reduce as the volume of the other of the chambers expands during movement of the piston, a channel which couples to the one of the chambers to create a resistance force to mechanical energy spent on the piston, means to adjust a flow cross section of the channel depending on excessive pressure acting on a movable element of a valve oppositely to an elastic element of the valve, the improvements wherein the flow cross section is adjusted relative to a position of the piston in the cavity for a constant value of the excessive pressure.

2. (original) A method according to claim 1, characterized in that the forward (return) movement of the piston is converted into a turn of a damper part, closing a constant restrictor, relative to a damper part in which an aperture of the constant restrictor is made, each angle of turn of those parts relative to one another sets in accordance therewith a degree of closure of the aperture of the constant restrictor by a movable part.

3. (original) A method according to claim 1, characterized in that the forward (return) movement of the piston is converted into a linear displacement of a damper part, closing a constant restrictor, relative to a damper part in which an aperture of the constant restrictor is made, each position of those parts relative to one another sets in accordance therewith a degree of closure of the aperture of the constant restrictor by a movable part.

4. (original) A method according to claim 1, characterized in that the forward (return) movement of the piston is converted into a turn of a damper part, closing a supply channel of the compression (expansion) valve, relative to a damper part in which an aperture of that supply channel is made, each angle of turn of those parts relative to one another sets in accordance therewith a degree of closure of the aperture of the supply channel by a movable part.

5. (original) A method according to claim 1, characterized in that the forward (return) movement of the piston is converted into linear displacement of a damper part, closing a supply channel of the compression (expansion) valve, relative to a damper part in which an aperture of that supply channel is made, each position of those parts relative to one another sets in accordance therewith a degree of closure of the aperture of the supply channel by a movable part.

6. (original) A method according to claim 1, characterized in that the forward (return) movement of the piston is converted into a turn of a damper part relative to another damper part which together with the first part forms a seat of the compression (expansion) valve, each angle of turn of those parts relative to one another sets in accordance therewith a size of an area limited by the seat of the compression (expansion) valve and a force with which the excessive pressure of the working liquid in the compression (expansion) chamber acts on the movable element of the compression (expansion) valve, the current position of which determines the current linear size of the slit of that valve.

7. (original) A method according to claim 1, characterized in that the forward (return) movement of the piston is converted into a linear displacement of a damper part relative to another damper part which together with the first part forms a seat of the compression (expansion) valve, each position of those parts relative to one another sets in accordance therewith a size of an area limited by the seat of the compression (expansion) valve and a force with which the excessive pressure of the working liquid in the compression (expansion) chamber acts on the movable element of the compression (expansion) valve, the current position of which determines the current linear size of the slit of that valve.

8. (currently amended) A method for adjusting the resistance of a hydraulic damper which has at least two chambers, the volume of one of which, a compression (expansion) chamber, is reduced, and the volume ~~ref~~ of the other, an expansion (compression) chamber, ~~is~~ is increased during forward (return) movement of a piston dividing them in a working cylinder of said damper, wherein due to the action of excessive pressure developed in said compression (expansion) chamber relative to other cavities of said damper during forward (return) movement of said piston, working liquid flows through a compression (expansion) channel which couples said compression (expansion) chamber to the other cavities of said damper, the action of excessive pressure of the working liquid on parts of said damper creates the resistance of said damper, mechanical energy spent on displacing said piston being consumed to accomplish work on overcoming the resistance, wherein in order to adjust the resistance of said damper, a flow cross section of said compression (expansion) channel is changed, depending on the value of excessive pressure, wherefore a force with which said excessive pressure is acting on a movable element of a compression (expansion) valve whose

current position determines a current linear size of a slit of said valve, is balanced by an oppositely directed elastic force of an elastic element of said valve, characterized in that said forward (return) movement of said piston is converted into a linear displacement of a support of said elastic element of said compression (expansion) valve relative to a seat of said valve, each position of said piston in said working cylinder is set in accordance with a respective position of said seat of said valve, a respective value of deformation of said elastic element of said compression (expansion) valve when closed and a respective force with which said elastic element presses said movable element against said seat of said valve when closed, a current position of which movable element determining the current linear size of said slit of said valve.

9. - 12. (canceled)

13. (amended) A device for adjusting the resistance of a hydraulic damper, which device comprises a hydraulic damper and has compression and expansion chambers formed as a result of dividing a cavity of said damper with a piston which is secured to a rod, a compression (expansion) channel, through which there is a flow of a wherethrough a working liquid flows from said compression (expansion) chamber to said expansion (compression) chamber during forward (return) movement of said piston in a working cylinder of said damper and which includes at least a compression (expansion) valve which comprises a plate closing an outlet aperture of said valve on the side of said expansion (compression) chamber, an elastic element, the elastic deformation of which occurs along a longitudinal axis of said working cylinder of said damper, and a support of said elastic element to fix a position of that

end of said elastic element which is opposite to said piston, relative to a seat of said compression (expansion) valve, characterized in that said piston of said damper and said support ~~of~~ of said elastic element of said compression (expansion) valve are made so as to be capable of turning separately about the longitudinal axis of said working cylinder of said damper; at least two longitudinal guides are provided on an inner surface of said working cylinder of said damper within a section thereof coincident with ~~the~~ a stroke of said piston stroke, at least one of said longitudinal guides being helical ~~in~~; at each point of the piston ~~stroke~~, stroke an angle of turning said support of said elastic element of said compression (expansion) valve relative to said ~~piston~~, piston is preset by the central angle between said guides; a structural element ~~via~~ by which said piston interacts with one of said ~~guides~~, guides is positioned on a side surface of said piston facing the inner surface of said working cylinder of said ~~damper-a damper~~; another structural element by which said support of said elastic element of said compression (expansion) valve interacts with the other one of said ~~guides~~, guides is positioned on a side surface of that support, the support of said support facing the inner surface of said working cylinder of said damper; said support of said elastic element of said compression (expansion) valve is made ~~an-as-to-be-capable-of~~ for moving along a cylindrical shank of said piston which has an axis thereof coincident with the longitudinal axis of said working cylinder of said damper and which is provided with at least one longitudinal, helical guide on an external surface thereof, said guide presetting a longitudinal position of said support of said elastic element of said compression (expansion) valve on the cylindrical shank of said piston for each angle of turning said support relative to said piston; a third structural element by which said support of said elastic element of said compression (expansion) valve interacts with said guide positioned on the shank of said ~~piston~~, piston is

positioned on a side surface of said support facing the cylindrical shank of said piston, ~~said~~  
~~said~~ structural element ~~via~~ by which said support of said elastic element of said compression  
(expansion) valve interacts with said guide provided on said working cylinder of said ~~damper~~,  
~~damper~~ is made ~~so as to be capable of~~ for moving along said support in the direction of the  
longitudinal axis of said working cylinder of said damper by ~~a much~~ as much as at least the  
maximum travel of said support along the cylindrical shank of said piston.

14. - 17. (canceled)